

INJURY PREVENTION 101



Moving Towards **Informed** Preventive Action

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True/False/Caveats?




“Without reflection, we go blindly on our way, creating more unintended consequences, and failing to achieve anything useful.”
—Margaret J. Wheatley

How do I build an intervention plan which is **strategic** and **effective** ?




Don't get trapped in the **process** of finding and analyzing data ..



move to data-informed planning & action

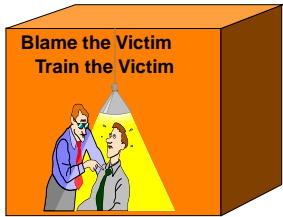
How?

We use conceptual frameworks to organize our information and guide our decision making



Strange but True

Using these multi-box matrices helps get us out of “the Box”



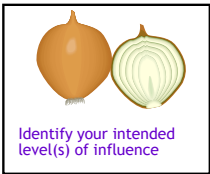
When we look **beyond** modifying individual behavior it becomes easier to think strategically about prevention...

Think ECOLOGICALLY



An Ecological Approach Addresses Many Layers of Influence

- ☐ Individual
- ☐ Family
- ☐ Peer Group
- ☐ Neighborhood
- ☐ Schools
- ☐ Organizational (e.g., school system)
- ☐ Community-level
- ☐ County/State/Regional/National



How and where can you have the most influence on prevention and control?

The Spectrum of Prevention



Larry Cohen, 1991; Cohen and Swift, 1999; www.preventioninstitute.org

In Which Injury Phase are You Intervening?



1. **Pre-Event**
- Reducing the number of events with the potential to cause injury.



2. **Event**
- Reducing the number of injuries that occur.



3. **Post-Event**
- Reducing the severity of injury and optimizing outcome.



Dr. Bill Haddon also gave us:
10 injury prevention strategies known as
“The Haddon Strategies”

The 10 Haddon Strategies

Range from “upstream” to downstream approaches



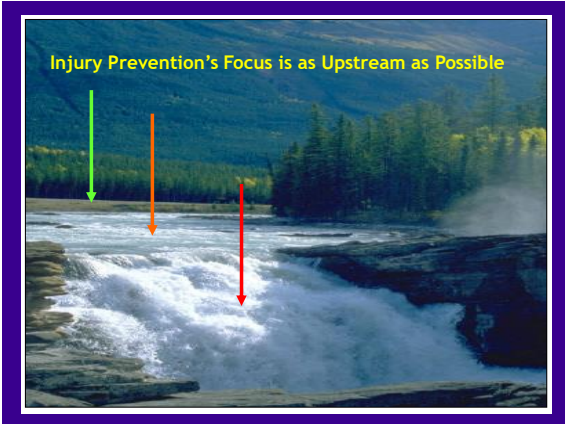
They include all categories of intervention strategy approaches (the E’s)

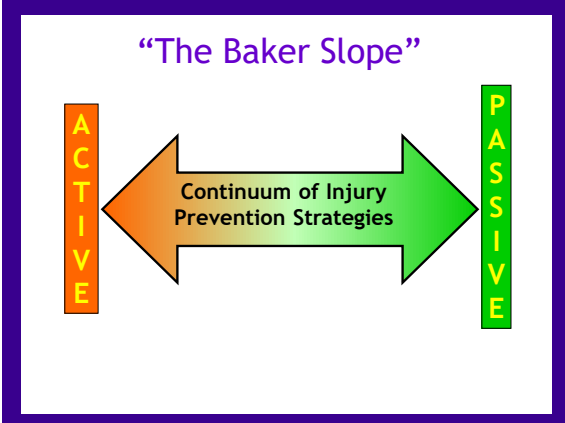
Haddon strategies applied - I

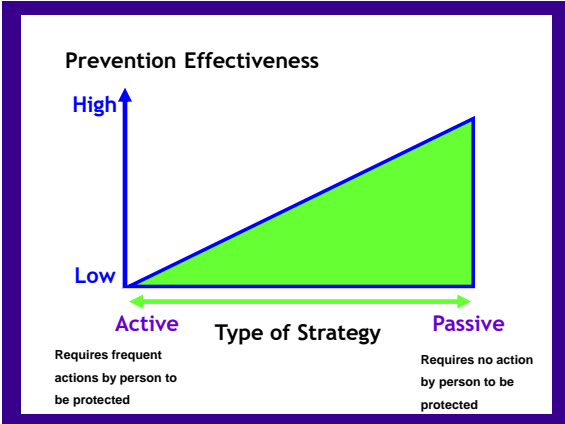
- #1 Prevent creation of the hazard
 - ban 3-wheel ATV’s; restrict types of ammunition
- #2 Reduce amount of the hazard
 - limit pills per container; decrease water temperature
- #3 Prevent release of the hazard
 - provide handrails for the elderly; improve brakes
- #4 Alter release of the hazard
 - blister packaging of pills; child restraints
- #5 Separate person and hazard in time and space
 - bike paths; remove trees near roads; evacuate hurricanes

Haddon strategies applied - II

- #6 Place barrier between person and the hazard
 - bike helmets; childproof closures; pool fences
- #7 Modify basic qualities of the hazard
 - breakaway poles; energy-absorbing surfacing
- #8 Strengthen resistance to the hazard
 - physical conditioning; building codes (earthquake)
- #9 Detect quickly
 - smoke detectors; road side phones; early warning systems
- #10 Repair the damage
 - EMS; treatment & rehabilitation; self-care training







The Injury Prevention E's



- Education
- Engineering
- Enforcement
- Economic incentives

Injury Prevention Approaches



- Education
 - Health Promotion
 - Health Behavior Change
 - Influencing Social Norms and Social Will

Injury Prevention Approaches



- Engineering
 - Technology
 - including medical
 - Environmental Change

Injury Prevention Approaches



- Enforcement
- Law
- Regulation
- Policy

What about Injury Prevention Advocacy? Where does it fit?

“Injury prevention advocates work to influence the way the public, policymakers and other decision makers think about and act on injury prevention policies.”

Susan De Francesco, JD, MPH, MAT



Discussion
(A.K.A. “Buzz Group”)

- 1. For each type of “E” strategy, think about what factors (other than funding) might be important for that strategy to have the potential to succeed.
 - ◆ This is about intervention design and components rather than funding, etc.
- 2. Can this type of strategy stand alone?
 - ◆ If yes, why?
 - ◆ If no, what could enhance it?

For education & behavior change strategies to work, the audience must:

- Be exposed to the appropriate information
- Understand and believe the information
- Have the resources and skills to make the proposed change
- Derive benefit (or perceive a benefit) from the change
- Be reinforced to maintain the change over time

Sleet and Gielen, 1998

Successful implementation of engineering & technology solutions requires that the technology:

- Be effective and reliable
- Be acceptable to the public and compatible with the environment
- Result in products that dominate the market place
- Be easily understood and properly used by the public

Sleet and Gielen, 1998

Key factors in making legislation and law enforcement strategies effective:

- The legislation is widely known and understood
- The public accepts the legislation and its enforcement provisions
- The probability, or perceived probability, of being caught if one breaks the law is high
- The punishment is perceived to be swift and severe

Sleet and Gielen, 1998

Rationale for Adopting an Ecological (Multi-level) Intervention Approach:

- Single strategies are seldom - if ever - successful in achieving and sustaining change...
- Interventions must be sensitive to the ecological context.
- They must address several areas.
- To achieve lasting change, interventions must be implemented with enough resource intensity (such as time and engagement).


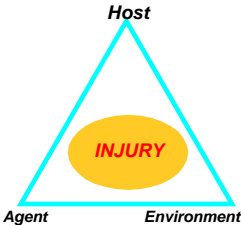
To protect ANY vulnerable group ...



Focus on Physical & Social Environmental Change



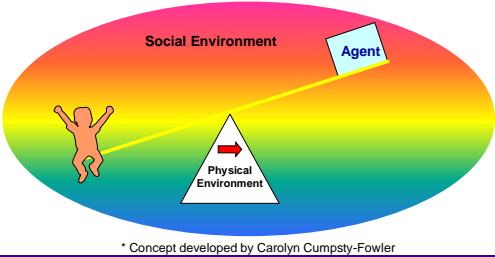
Our Goal: Positive Ecological Balance*



* Concept developed by Carolyn Cumpsty-Fowler

“Negative ecological balance*”:

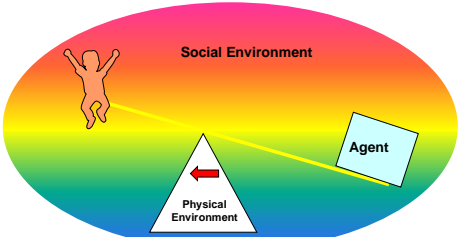
Environmental conditions favor the agent/vehicle and increase the vulnerable person’s risk for injury.



* Concept developed by Carolyn Cumpsty-Fowler

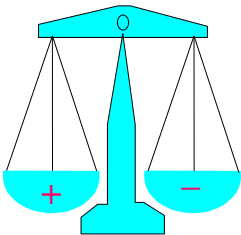
“Positive ecological balance*”:

Environmental conditions favor the vulnerable person and reduce the risk for injury.



* Concept developed by Carolyn Cumpsty-Fowler

When setting priorities, we consider:



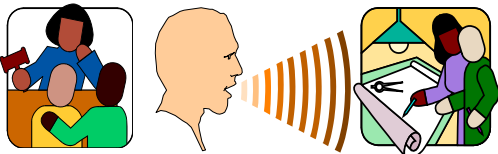
- Money
- People Power
- Time
- Materials
- Space
- Who Benefits
 - ◆ From change
 - ◆ From status quo
- Politics
- Potential risks

What do these options mean for us?

LAW


EDUCATION

TECHNOLOGY




GOOD NEWS! The type of intervention we hope to achieve is not necessarily the type of work we will have to do to make it happen.

An Intended Environmental Change: 3 Candidate Intervention Choices



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graph LR; A1[Do it yourself #1] --> G[YOUR GOAL: MODIFICATION OF AN UNSAFE PLAYGROUND IN THE TARGET COMMUNITY]; A2[Advocate for policy which mandates change #2] --> G; A3[Build a community coalition to take on this project #3] --> G;
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North Dakota 2016 Injury Prevention & Control Conference

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Different Strategies

Have different strengths and weaknesses



...weigh the pro's and con's carefully

The Revised Intervention Decision Matrix ©

Fowler & Dannenberg 1995 (revised 1998, 2003, & 2008)

- ❑ Is a simple tool designed to help people identify intervention options and choose between them .
- ❑ It can also help identify long term goals and intervention options which may support each other.

Elements of the Revised Intervention Decision Matrix ©

- ❑ Effectiveness
- ❑ Feasibility
- ❑ Affordability (Cost-feasibility)
- ❑ Sustainability
- ❑ Ethical Acceptability
- ❑ Social Will
- ❑ Political Will
- ❑ Possible Unintended Consequences
 - ◆ Benefits
 - ◆ Potential to “Do No Harm” (Avoid Unintended Risk)

Revised Intervention Decision Matrix ©			
Fowler CJ & Dannenberg AL, 1995. Revised 1998, 2000, 2003 & 2008			
INTERVENTION	OPTION#1	OPTION#2	OPTION#3
Effectiveness			
Feasibility			
Cost-Feasibility			
Sustainability			
Ethical Acceptability			
Political Will			
Social Will			
Potential for Unintended Benefits			
Potential to "Do No Harm" (Avoid unintended risks)			
FINAL PRIORITY RATING			

Compare options ranking each cell as "high, medium, or low priority". Which option is strongest? Is there a "fatal cell"?

Decision Matrix: Next Steps

Gap Analysis
Combining Interventions
Building Towards Stronger Interventions

What is not reachable today may be reached tomorrow...

..if we plan and build the road

Revised Intervention Decision Matrix ©
Fowler CJ & Dannenberg AL, 1995. Revised 1998, 2000, 2003 & 2008

INTERVENTION	OPTION#1	OPTION#2	OPTION#3
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Feasibility			
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Potential to "Do No Harm" (Avoid unintended risks)			
FINAL PRIORITY RATING			

Compare options ranking each cell as "high, medium, or low priority". Which option is strongest? Is there a "fatal cell"?

More Good News!

... can be targeted and changed
(by the patient and persistent!)

Fact:

Social Will Can Shape

The Community is the
SOLUTION




Not the intervention **SITE**

Do you know your community?



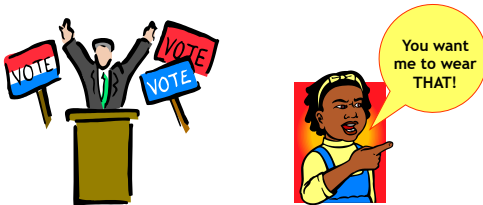
How can you get the
“complete picture”?



Even apparently
similar
situations may
be different.

Each presents
unique
challenges and
opportunities!

Careful assessment reveals human factors that can impact program design, implementation, outcomes and potential for institutionalization.



For most people, health is only a means to an end

Understanding what is important to your intended audiences - both recipients and collaborators - is critical to program success.



Get to know your intended audience's

- ☐ Knowledge/Attitudes/Beliefs/Skills
- ☐ Behaviors/Practices
- ☐ Priorities
- ☐ Resources
- ☐ Readiness for change
- ☐ Barriers to change/Change facilitators
- ☐ Program preferences
- ☐ Distribution outlets
- ☐ Choice of "language"

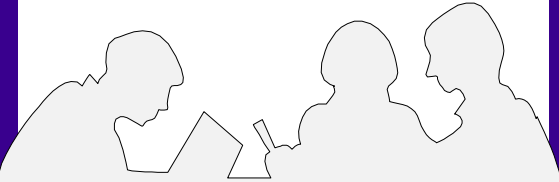


What you don't know may come back to haunt you!

Implementation of effective strategies is a major challenge for the injury prevention community



When selecting an intervention we think about who we are ..



What will we have to do make the intervention happen?
Do we have the skills and resources necessary to accomplish it?
Is it a “good fit”?
If we answer “NO”, we rethink our options.


Involve the stake-holders



Example: Do you have
Endorsement from Enforcement?




A key survival skill for
injury prevention
planners in the real world



“[Learn how you can] navigate most effectively through organizational, political, and other practical realities to implement meaningful injury prevention programs.”

Christoffel & Gallagher
Injury Prevention and Public Health; 1999:344



You don't have to tackle the whole problem by yourself..or do the whole program by yourself.

When selecting an intervention we then...



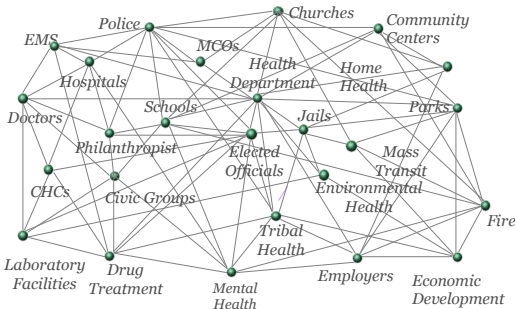
... think about who our partners are. Together,

do we have the skills, resources and influence necessary to accomplish the intervention?

can we overcome "goodness of fit" barriers?

If "NO", we look for additional partners or rethink our options.

Who's Really Involved in IP & C?



Source: Adapted CDC Graphic obtained from the NYU Public Health Training Center.

Don't limit your partnership options to in-person collaboration



Partnerships that work ..

☐ Connect and mobilize resources

☐ Can have multi-level influence

☐ Are powerful change agents

But....?



